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Self hardenable sand mould composite - consists of moulding sand, free

aldonic or uronic acid, sugar, cement and water
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Abstract (Basic): JP 54128934 A

Self-hardenable sand mould composite consists of a moulding sand, free aldonic acid or uronic acid, sugar, cement and water. The sugar consists of monosaccharides of carbon hexasaccharides such as glucose, fructose, galactose, mannose and sorbose etc. or carbon pentasaccharides such as ribose, arabinose, xylose etc. The aldonic acid is gluconic acid, glucoheptonic acid, xylonic acid or arabonic acid, and the uronic acid is glucuronic acid. The moulding sand may be of e.g. silica, olivine, zircon or other and is added with the aldonic or uronic acid by 0.1-5(0.5-3)wt.%, the sugar 0.1-8(1-4)wt.%, the cement 0.1-10(1-6)wt.% and water 1-7(1.5-3.5)wt.%, respectively.

The mould composite increases its raising strength in a short time without reducing its final strength. Collapsibility of the mould is good. The sand can be reused by 100%.

Title Terms: SELF; HARDEN; SAND; MOULD; COMPOSITE; CONSIST; MOULD; SAND; FREE; ALDONIC; URONIC; ACID; SUGAR; CEMENT; WATER